

ERRATA: OVER-EXPLOITATION OF LARVAL HOST  
PLANTS BY *HELICONIUS* BUTTERFLIES

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I take this opportunity to agree with, and to thank, both Drs. Keith S. Brown, Jr. and Lawrence E. Gilbert for expressing their concern for the errors I made in the paper discussed by Gilbert (1982). My errors were initially pointed out to me by a letter from Dr. Brown, and subsequently I received a copy of an earlier version of Dr. Gilbert's manuscript. In this note I wish to explain the sources of my errors appearing in Young (1980).

My error in confusing *Passiflora pittieri* for a species of *Granadilla*, as pointed out by both Drs. Brown and Gilbert, arose from a superficial comparison of a photograph with the plant shown in figs. 1-3 (Young 1980), which was determined by Brown (pers. comm., 30 April 1977) to be *Granadilla*. Gilbert (1982) disagrees with this determination. My error was compounded by not having a voucher specimen for determination. I hesitated to collect the individual plant in question because I wanted to observe possible repeated *Heliconius* oviposition on both plants over a year or longer. Neither plant was therefore collected. *Granadilla* and *P. pittieri* are systematically far apart from one another in the evolution of the Passifloraceae (Benson et al. 1976). Furthermore, Laurifoliae is a series, not a subfamily (Benson et al. 1976).

My misidentification of *Heliconius sapho* as *H. cydno* in fig. 4 (Young 1980) came from missing the clearly diagnostic small red patch at the base of the hindwing, very visible in the ovipositing butterfly and in the photograph (fig. 4) as a small light area. The butterfly had not been collected to make a confirmative determination. At the time it did not occur to me that the shape of the white fore-wing patch (seen in my fig. 4A) is also diagnostic of *H. sapho* as pointed out by Dr. Gilbert in the accompanying note. I simply did not know this. *Heliconius sapho* is not in the *melpomene* group (Benson et al. 1976) as I incorrectly stated in my paper.

Members of the *H. sapho* group customarily lay large numbers of eggs on individual host plants (Benson et al. 1976; Brown 1981), thereby explaining the high abundance of eggs I reported (Young 1980). *Heliconius sapho* typically lays 10-40 eggs on a rapidly growing meristem (Brown 1981). Dr.

Brown (pers. comm.) believes that the reproductive strategy of members of the *H. sapho* group includes the possibility of sometimes laying many more eggs on an individual host plant than can survive, so it is sometimes observed that only one or two larvae make it to pupation. This may be related to the frequent "explosive" mode of growth of young shoots on the *Astrophea* host plants (Benson et al. 1976). Thus one may assume that the high density of eggs observed on the second host plant in my study is typical oviposition behavior of *H. sapho*, and that the butterfly exhibits the same behavior on large host plant individuals as well as on small ones which are expected to grow rapidly.

Gilbert, in the accompanying note, has comprehensively summarized detailed information on the oviposition behavior of both *H. cydno* and *H. sapho* in relation to larval host plants, and has clarified how to distinguish the larval host plants in my study.

In the study discussed here, I was not able to follow two standard procedures I use for confirming the identifications of host plant and butterfly species used in my other published field studies in Costa Rica. I did not, in Young (1980), collect the butterfly or host plant material, thereby increasing markedly the potential for my margin of error.

In closing, I am appreciative of the professional concerns expressed by Drs. Brown and Gilbert in relation to the errors appearing in my paper (Young 1980). I thank the editor of this journal for giving me the opportunity to clarify the nature of these unfortunate mistakes. I offer particular thanks also to Dr. Keith S. Brown, Jr. for his encouragement and assistance with clarifying these errors, and for reading over an earlier draft of this note.

#### Literature Cited

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Received for publication December 15, 1981.